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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/617,738 | 07/14/2003 | Beverly B. Renshaw | 14397 | 3603 |

293 7590 11/01/2006

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| EXAMINER |
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BELT, SAMUEL E

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| ART UNIT | PAPER NUMBER |
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3746

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/617,738 | Applicant(s) RENSHAW, BEVERLY B. | |
| | Examiner Samuel E. Belt | Art Unit 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S. Patent 2,382,421) in view of Rockwell (U.S. Patent 1,420,753).

Johnson et al. disclose a hydraulic gas compressor comprising: an upper closed vessel (Figure 3, item 15), liquid inlet means (Figure 3, between items 16 & 23) and liquid outlet means (Figure 3, item 23); an open vessel (Figure 1, item 51), arranged in vertical spaced relationship below said closed vessel, and having liquid inlet means (Figure 1, item 54), gas outlet means (Figure 1, item 65) and liquid outlet means (Figure 1, item 57); tubular means (Figure 1, item 22) between said liquid outlet means in said closed vessel and said liquid inlet means in said open vessel so as to provide a fluid flow path there between; pump means (Figure 1, item 12) between said liquid outlet means in said open vessel and said liquid inlet means in said closed vessel arranged so as to circulate liquid from said open vessel to said closed vessel; and aerator means (Figure 1, item 30) in said closed vessel arranged so as to entrain gas from said gas inlet means in said liquid flowing in said fluid flow path between said closed vessel

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and said open vessel; wherein said liquid is water and said gas is air (column 1, lines 1+).

The Johnson et al. device differs from the claimed invention in that there is no explicit teaching of a gas inlet means in a closed vessel, which admits gas from an area wherein at least a partial vacuum is to be created.

It is was well known at the time of the Johnson et al. device that inlet valves could be used in order to better regulate the fluid flow into or out of a system. This is further evidenced by Rockwell, who teaches a vacuum liquid supply system having a gas inlet valve (Figure 2, item 25) in a closed vessel (Figure 2, item 23), which admits gas from an area wherein at least a partial vacuum is to be created (**See Note**). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to modify the Johnson et al. device by using a gas inlet valve as taught by Rockwell, in order to advantageously control the amount of fluid/air flowing into the system.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S. Patent 2,382,421) as modified by Rockwell (U.S. Patent 1,420,753) and in further view of McGraw-Hill Book Company (Mechanical Engineers Handbook, 1941, pages 1914-1915).

In regard to claim 2 Johnson et al. as modified by Rockwell sets forth a device as described above, which is substantially analogous to the claimed invention. The

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Johnson et al. as modified by Rockwell device differs from the claimed invention in that there is no explicit teaching of the tubular means comprising a pipe in the range of 20-40 feet long. McGraw-Hill Book Company teaches a hydraulic compressor having a tubular means with a water head that is 70 feet and under (Page 1914). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to modify the Johnson et al. as modified by Rockwell device by using a tubular means as taught by McGraw-Hill Book Company, in order to advantageously control the pressure generated by the system.

In regard to claim 3 Johnson et al. as modified by Rockwell sets forth a device as described above, which is substantially analogous to the claimed invention. The Johnson et al. as modified by Rockwell device differs from the claimed invention in that there is no explicit teaching of using a pump motor in the range of 12-15 horsepower but it is well settled in the art that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, In Re Aller, 105 USPQ 233 such that one skilled in the art would have been motivated to chose a pump motor which was suitable for delivering water to the liquid inlet of the closed vessel (column 2, lines 1+).

(**Note:** It is noted that since the Rockwell device incorporates the use of a vacuum on a contained system there will be a "partial vacuum" throughout, including the main supply tank (Figure 2, item 23))

Response to Arguments

Applicant's arguments with respect to claims 1-6 have been fully considered but they are not deemed persuasive in view of the rejection as stated above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

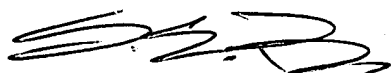
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel E. Belt whose telephone number is (571) 272-7820. The examiner can normally be reached on M-F, 8 - 4:30EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone


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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SEB



EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER